Undersecretary of the Navy Presents 2009 Energy & Water Management Awards

Seven Commands Recognized for Saving Energy & Water, Reducing Environmental Impact

THE HONORABLE ROBERT O. Work presented the 2009 Secretary of the Navy (SECNAV) Energy and Water Management Awards for outstanding performance in addressing federal energy policy on 27 October 2009 at the Navy Memorial and Naval Heritage Center in Washington, D.C. During his keynote speech, Mr. Work emphasized the secretary's new goals for energy reduction, and stressed the importance of energy management. "This year, Secretary Mabus has declared the reduction of the Department's consumption of fossil fuels to be one of his three top priorities," said Work.

There has been no shortage of new federal energy policy in recent years. The Energy Policy Act of 2005, The Energy Independence and Security Act of 2007, Executive Order 13423, renewable energy provisions in the National Defense Authorization Act of 2007 and the Federal Leadership in High Performance and Sustainable Buildings Memorandum of Understanding all contributed substantial new requirements. The policies invoke wide-ranging and aggressive energy and water initiatives, including:

- Reduce installation energy consumption per square foot 30 percent by 2015 relative to 2003,
- Reduce installation water consumption per square foot 16 percent by 2015 relative to 2007,
- Require Leadership in Energy and Environmental Design Silver or higher certification required for new facilities,
- Construct new facilities 30 percent more energy efficient than American Society of Heating, Refrigerating and Air-Conditioning Engineers standards,
- Reduce fossil fuel use in new and renovated buildings by 55 percent by 2010 and 100 percent by 2030,
- Meter all facilities with advanced time-of-use electrical meters,
- Purchase Energy Star or Federal Energy Management Program-designated equipment—written justification required to deviate, and

SECNAV Announces Energy Goals

THE SECRETARY OF the Navy, at a Naval Energy Forum in October 2009, announced more goals for the Department:

1. Change the way the Navy and Marine Corps awards contracts. The lifetime energy cost of a building or a system, and the fully burdened cost of fuel in powering those, will be a mandatory evaluation factor used when awarding contracts.
2. By 2012, demonstrate in local operations a Green Strike Group composed of nuclear vessels and ships powered by biofuel.
3. By 2015, reduce petroleum use in our 50,000 strong commercial fleet in half.
4. By 2020, produce at least half of our shore-based energy requirements from alternative sources.
5. By 2020, half of the Department of the Navy's (DON) total energy consumption for ships, aircraft, tanks, vehicles and shore installations will come from alternative sources.

- Generate/procure renewable energy equal to 25 percent of electrical energy consumed by 2025.

Innovative energy staff is key to meeting the steep and ever increasing federal energy and water reduction goals. Government energy managers and contract resource efficiency managers at several commands across DON are rising to the challenge. These leaders create a plan, follow their plan, check progress and implement course corrections as necessary. In particular, they:

1. Take advantage of internal and external funding sources to survey for opportunities,
2. Implement cost-effective energy and water infrastructure improvements,
3. Implement new technologies,
4. Review designs for new construction and major renovations to ensure energy efficiency is incorporated, and
5. Engage workers to be energy conscious in their daily jobs.

At the highest performing commands, everyone knows to do their part and shut off office and shop equipment when it's not in use, keep doors and windows closed when the heat or air conditioning is on, shut off unnecessary lights and report energy or water waste (such as missing weather stripping, broken door closers or leaking plumbing fixtures) when they see it.

Here are a few of the accomplishments of the commands that rose to the top in the prestigious SECNAV Energy and Water Management Awards competition for 2009:

The Honorable Robert O. Work, Under Secretary of the Navy, emphasized the Secretary's new goals for energy reduction.
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Navy Large Shore Category

Naval Base Kitsap, Bremerton, WA has reduced energy intensity by 17 percent from their Fiscal Year (FY) 2003 baseline and water consumption by 24 percent from the FY 2007 water baseline. The installation maintains an energy waste hotline and rewards reporters with small energy efficiency program materials. Projects include upgrading Heating, Ventilation and Air Conditioning (HVAC) systems with improved equipment and controls, installation of variable frequency drives on boiler feed water pumps, installation of automatic high-speed roll-up doors at industrial buildings, lighting upgrades, including replacing 32-watt lamps with 25-watt lamps, installation of advanced boiler controls in the Bangor site steam plants, upgrade of chillers to state-of-art variable-speed oil-free chillers and duct sealing of the HVAC ducts at the Bremerton Bachelor's Quarters.

Navy Small Shore Category

Naval Submarine Base Kings Bay, GA achieved a 45 percent reduction from their FY 2003 baseline and an 11 percent reduction from their FY 2007 water baseline. They awarded a financed energy project that replaced 240 horsepower of electric aerators and blowers with solar aerators for the wastewater treatment lagoons and replaced several areas of failing medium temperature hot water distribution lines. They also installed a cooling water blow down recirculation system for the central chilled water plant, solar powered sump pumps for thermal manholes and solar powered stop signs. A total investment $4.5 million in energy and water saving initiatives is avoiding $550,000 in utility costs per year.

2009 SECNAV Energy and Water Management Award winners along with Platinum and Gold commands.
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Navy Industrial Category

Naval Undersea Warfare Center (NUWC), Division Keyport, WA has reduced energy use by 12 percent from an FY 2003 baseline. The NUWC Keyport energy web site not only provides energy efficiency information and resources, but also lists energy projects and on-going initiatives that are planned, in progress or recently completed, allowing all base personnel a window into this important facet of institutionalizing energy savings and implementing new technologies. FY 2008 projects included converting the antiquated and problematic steam heat system in Building 84 to high-efficiency, direct-fired, natural gas unit heaters and installing remote boilers to remove six additional buildings from central steam. Additionally, Keyport installed rapid access cargo doors, lighting upgrades and HVAC system upgrades.

Marine Corps Large Shore Category

Marine Corps Air Station Miramar, San Diego, CA has reduced energy intensity by 14.5 percent from an FY 2003 baseline and water intensity by 15 percent compared to an FY 2007 baseline. Energy projects included implementing an HVAC replacement and re-commissioning program. Miramar also completed a project that tied existing irrigation controllers to a centralized system, and completed multiple projects that tapped into the City of San Diego's reclaimed water line, avoiding $1 million in annual potable water costs. Miramar was selected as the pilot location under the Department of Defense/Department of Energy Joint Venture Toward Net Zero Energy Installations and developed a "Green Installation Campaign Plan" to serve as a strategic vision for the air station.

Marine Corps Small Shore Category

Marine Corps Recruit Depot Parris Island, SC has reduced energy intensity by 14 percent from an FY 2003 baseline and water intensity by 15 percent compared to an FY 2007 baseline. Parris Island completed a $1.5 million Energy Conservation Investment Program project that implemented multiple facility energy upgrades and also executed a $1.4 million chiller replacement program using variable frequency drive, frictionless magnetic compressor equipped chillers. Parris Island has installed 1,395 tons of air conditioning to date using the highly-efficient chiller technology that was demonstrated and given a "Green Light" by the Navy's Technology Validation Program. Parris Island supported Energy Star's "Operation Change-out" by giving out 212 compact fluorescent lamps during their Energy Fair. The base continued their building energy monitor program and adjusted landscape water schedules for high visibility areas associated with the recruit graduation areas.

Large Ship Category

USS BONHOMME RICHARD (LHD 6) saved over 26,000 barrels of fuel in FY 2008 over the LHD 1 class average. All hands employed a comprehensive energy strategy that included inspections, training and actions. The commanding officer encouraged all hands to adhere to the Naval Sea Systems Command's (NAVSEA) ENCON Program guide, check list and SECAT software for fuel

management. The Commanding Officer and Executive Officer conducted weekly tours through all engineering spaces, assessing methods to reduce energy use. The navigation officer selected optimal courses and speeds, considering the shortest route and the effects of the wind and current. Crew calibrated over 1,000 critical pressure and temperature gauges, which enhanced the efficiency of the engineering plant. These and other actions produced a cost avoidance of nearly $4.5 million.


USS BONHOMME RICHARD (LHD 6).

Small Ship Category

USS HALSEY (DDG 97) saved over 34,000 barrels of fuel compared to the DDG 51 class average. HALSEY achieved this unprecedented cost avoidance among DDG class ships despite a high rate of deployment during the rating period. This great result is partly because HALSEY attended all NAVSEA ENCON training classes and used program's energy conservation strategies and techniques. The ship's commanding officer regularly addressed the importance of fuel economy in his night orders directing crew to operate at trail shaft and maximum fuel economy. HALSEY pioneered the concept of Single Generator Operation as an energy-saving strategy. HALSEY's commitment to maximum fuel economy resulted in a cost avoidance of nearly $6 million.


USS HALSEY (DDG 97).

In addition to recognizing the above winners, Mr. Work acknowledged platinum, gold and blue energy and water management levels of achievement across the Department of the Navy. ⚓

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